

Appl. No. 10/538,136

Reply to Office Action of March 13, 2008

Amendments to the Drawings:

Objection to the Drawings

Enclosed is a new sheet of drawings.

In Fig. 1, the label "Prior Art" is added as requested by the Examiner.

REMARKS/ARGUMENTS

Drawing Objections

The Examiner required that Figure 1 be labeled "Prior Art". Figure 1 is amended as required.

Substance of Interview (13 June 2008)

The Examiner also required drawings to show the composition components of a layer. During a telephone conference the Applicants requested reconsideration. The Examiner's request is contrary to usual Patent Office practice as set forth in MPEP 601.04(f) in the paragraph just before paragraph (A) and or as discussed in paragraph (B) and paragraph (D). The invention is in the composition of the external electrode e.g. as shown in Figure 1. The Examiner has now withdrawn this requirement.

Art Rejections

Claims 1-2 and 4-6 are rejected under 35 USC 103(a) as being unpatentable over the machine translation of Shioya (MT Shioya) in view of Ogawa et al.

MT Shioya teaches a multilayer ceramic electronic part while Ogawa is relied on to teach a conductive paste used to

make capacitor termination, comprising a conductive alloy powder composed of high melting point metals and metal with a melting point of 300°C or less and wherein the metal powder having a melting point of 300°C or less is present in an amount of 5% to 17.6% (referring to Table 2, alloy powder No. 17 which the Examiner interprets as teaching 5% Sn). The Examiner considers not only that Ogawa teaches a conductive paste meeting the requirements of the present invention but also that it would be obvious to combine this teaching with MT Shioya. Applicants respectfully disagree with both conclusions.

First, it is submitted that Ogawa does not teach the claim requirement of a powder having a melting point of 300°C or less by showing an alloy containing 5% Sn. As admitted by the Examiner, the disclosure in Table 2 is of an alloy not of the metal itself. Since the alloy is mostly copper, a person of ordinary skill in the art would understand that a metal powder made of this alloy would have a melting point substantially higher than the maximum 300°C limitation of the present claims. In support of this, annexed hereto are pages from a Metals Handbook which includes a table of melting temperatures of principal copper casting alloys. Although the exact alloy is not shown, alloys varying around the range

of materials used in the alloy shown in Ogawa, have melting points of over 800°C.

It is submitted that the range of "from 5% to 17.6%" in the present invention is not obvious over MT Shioya in view of Ogawa for the following reasons:

Ogawa discloses an alloy powder having Sn component (table 2, alloy powder, No.17). However, Ogawa does not teach a mixture of Sn powder and a powder having a high melting point, as required by the claims. There is no reason to consider that teaching about the amount of Sn in the alloy is a teaching of an amount of Sn powder in the mixture. Further, alloy powder No. 17 has Cu as a main component; thus, it should have a high melting point. An alloy is different from its component and Alloy 17 is different from Sn powder having a melting point of 300°C or less.

Another difference is in the resin composition of the electrode of Ogawa. The conductive paste disclosed in Ogawa is fired in air at a high temperature to form an electrode (column 5, lines 19 to 25). That is, the resin is used as a carrier which is then burned off. Thus, it is appears that the resin component in the paste does not remain in the electrode and the completed electrode fails to meet the requirement of the present claims of a resin compound

content.

Concerning combining Ogawa with MT Shioya, a conductive paste disclosed in MT Shioya (as is the conductive paste in the present invention) is a thermosetting conductive paste. This resin component in the paste is cured and remains in the electrode. It is not burned off. Based on this difference, it is submitted that the combination of Ogawa and MT Shioya is not obvious but rather taught "away from". They are incompatible in this feature. Also, even if combined, the result fails to meet the important requirements of the present claims as detailed above.

The results of the present invention are not expected from the applied art. It is clear from the working examples of the present specification that the multilayer ceramic electronic part of the present invention has excellent effects. For example, the decrease of electric capacitance was small even after heat-cycles (table 2, lines 3 to 7, page 17 of the present invention). As suggested in lines 7 to 8, page 8 of the present specification, the electric capacitance after heat-cycles is influenced by thermal stress. The examiner pointed out that Ogawa teaches prevention of the lowering of the resistance against thermo-oxidation. However, Ogawa is silent about a eliminating thermal stress.

Appl. No. 10/538,136

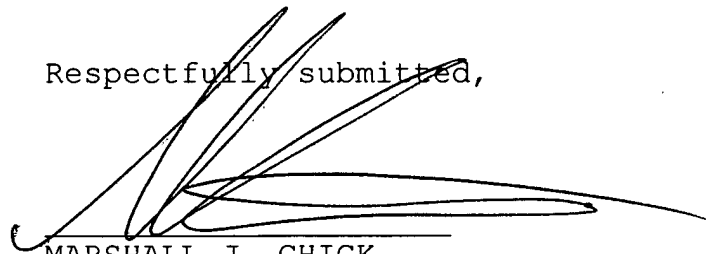
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Therefore, a person skilled in the art would not have a reasonable expectation of the above-mentioned effects of the present invention from Ogawa.

In view of the above, the rejections are avoided. Allowance of the application is therefore respectfully requested.

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Respectfully submitted,

A large, stylized handwritten signature in dark ink, appearing to be 'MARSHALL J. CHICK', written over a horizontal line.

MARSHALL J. CHICK
Reg. No. 26,853

Encs. Petition for Extension of Time for one month
Form PTO-2038 - \$120
Pages from Metals Handbook
Replacement Sheet 1 (Fig. 1)
IDS and cited references